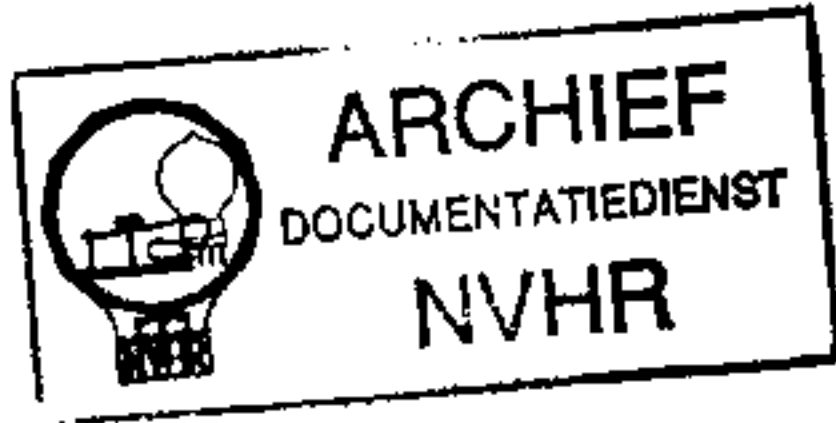


# GRUNDIG

Met dank aan Bjarne Stridsberg

# TONBAND-

Ned. Ver. v. Historie v/d Radio



# Service

TK 20

TM 20

TK 22

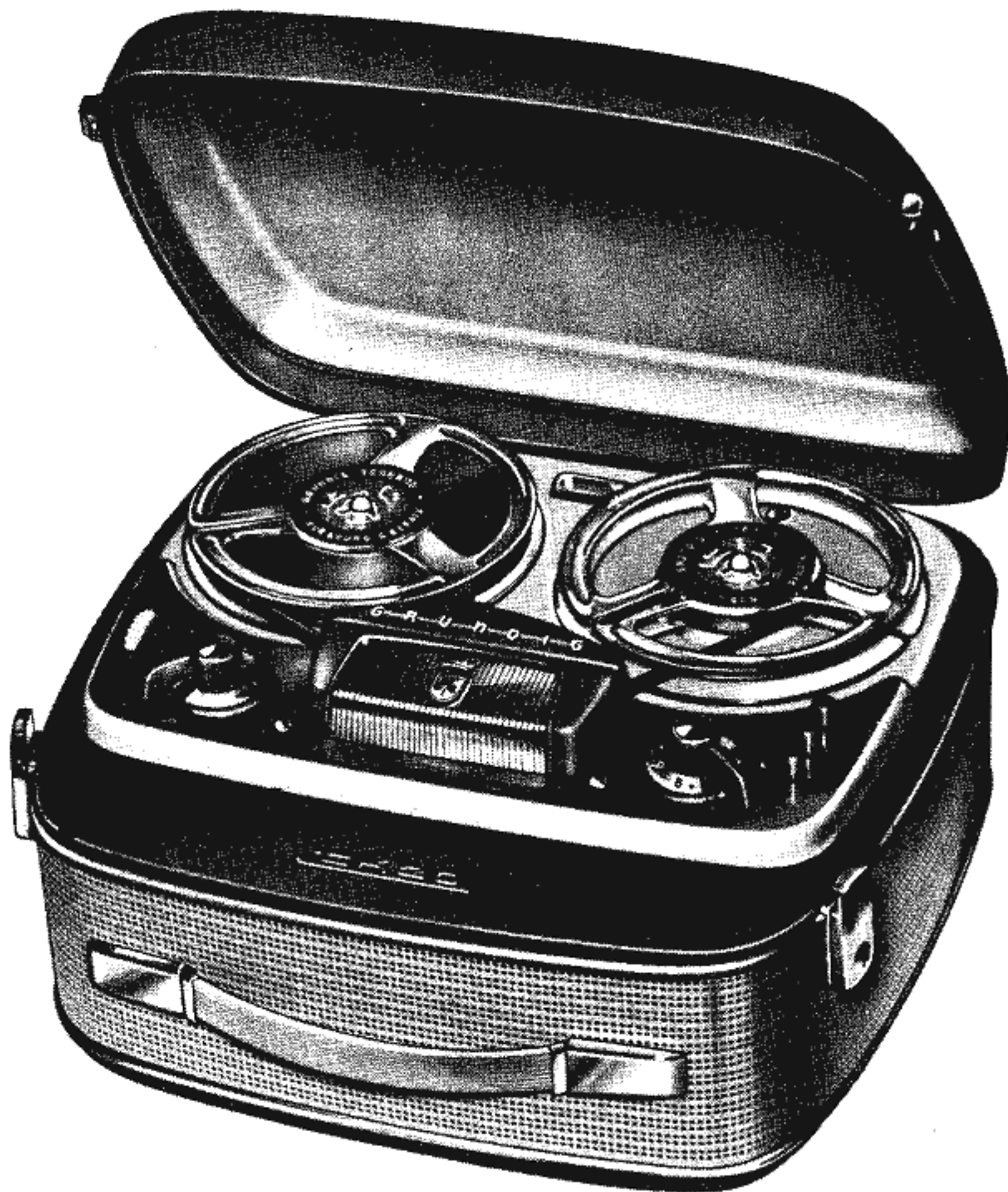
TK 25

TR 20

TS 58

(Schatulle)

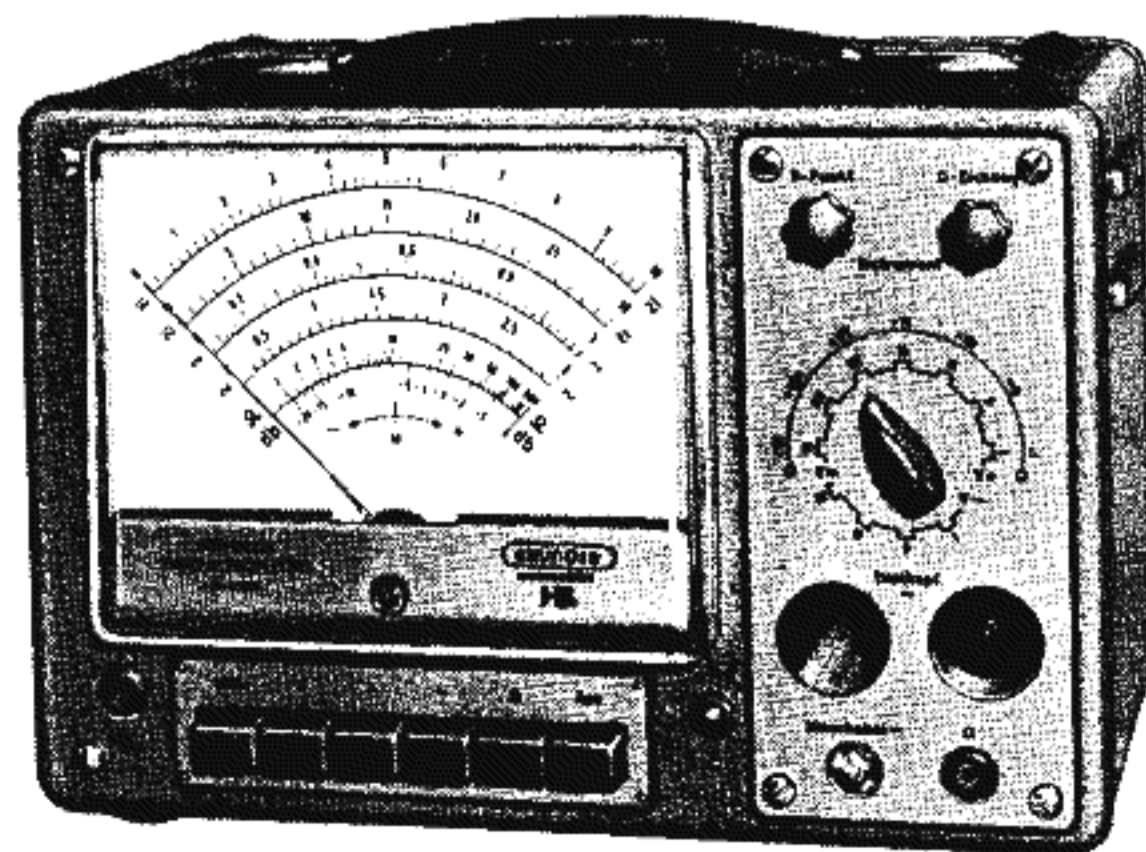
# SERIE T 20



TECHNISCHE DATEN



Technische Daten	TK 20	TM 20	Schatulle	TR 20	TK 22	TK 25
Stromaufnahme $\pm 10\%$ 9,53 cm/s 4,75 cm/s	220 mA —	180 mA —	290 mA —	180 mA —	— 220 mA	252 mA 272 mA
Netzsicherungen	110 V 1 A flink 220 V 0,5 A flink	110—125 V 1 A flink 165—240 V 0,5 A flink	110—125 V 0,8 A träge 220 V 0,5 A träge	110—165 V 0,5 A mitteltr. 200—240 V 0,3 A mitteltr.	110 V 1 A flink 220 V 0,5 A flink	110—150 V 1 A flink 200—240 V 0,5 A flink
Anodensicherung — träge	100 mA	80 mA	200 mA	80 mA	100 mA	100 mA
Bandgeschwindigkeit cm/s	9,53	9,53	9,53	9,53	—	9,53
Toleranzen n. DIN 45511	—	—	—	—	4,75	4,75 umschaltbar
Frequenzbereich 9,53 cm/s 4,75 cm/s	50—10000 Hz —	50—10000 Hz —	50—10000 Hz —	50—10000 Hz —	— 60—8000 Hz	50—15000 Hz 60—8000 Hz
Ausgänge: Normbuchse DIN 41524 hochohmig niederohmig	10 k $\Omega$ ca. 2 $\Omega$	— —	— —	10 k $\Omega$ —	10 k $\Omega$ ca. 2 $\Omega$	10 k $\Omega$ ca. 4 $\Omega$
Messerkontaktleiste hochohmig niederohmig	— —	10 k $\Omega$ —	— ca. 3 $\Omega$	— —	— —	— —
Max. Leistung der Endstufe bei $K_{tot} = 10\%$	1,5 W	—	—	—	1,5 W	1,5 W
Klirrfaktor bei Voll- aussteuerung	6%	6%	6%	6%	6%	6%
Gleichlauffehler, gehör- richtig gemessen 9,53 cm/s 4,75 cm/s	$\pm 0,25\%$ —	$\pm 0,25\%$ —	$\pm 0,25\%$ —	$\pm 0,25\%$ —	— $\pm 0,45\%$	$\pm 0,25\%$ $\pm 0,45\%$

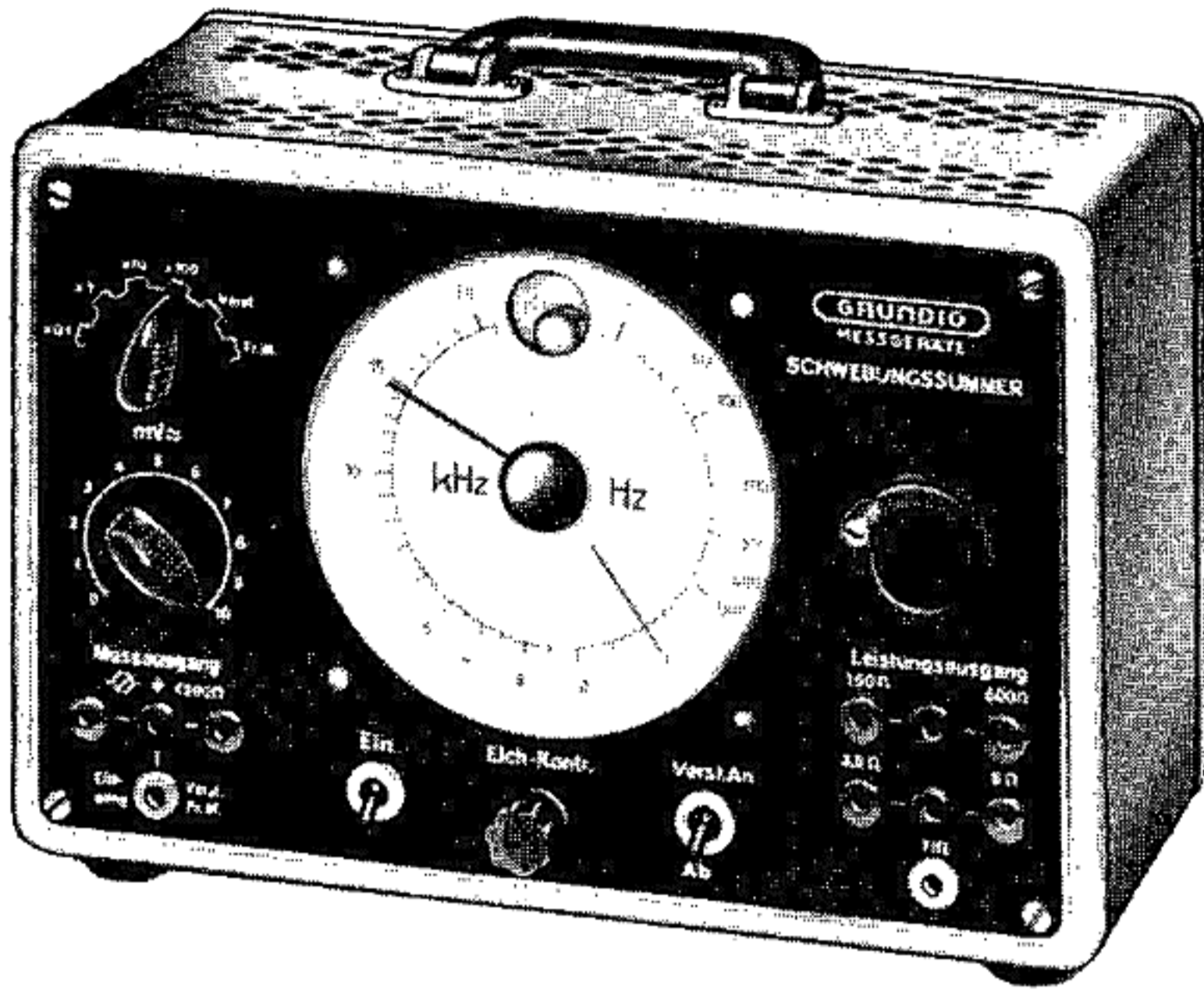


Universal-Röhrenvoltmeter RV 2 (6062)

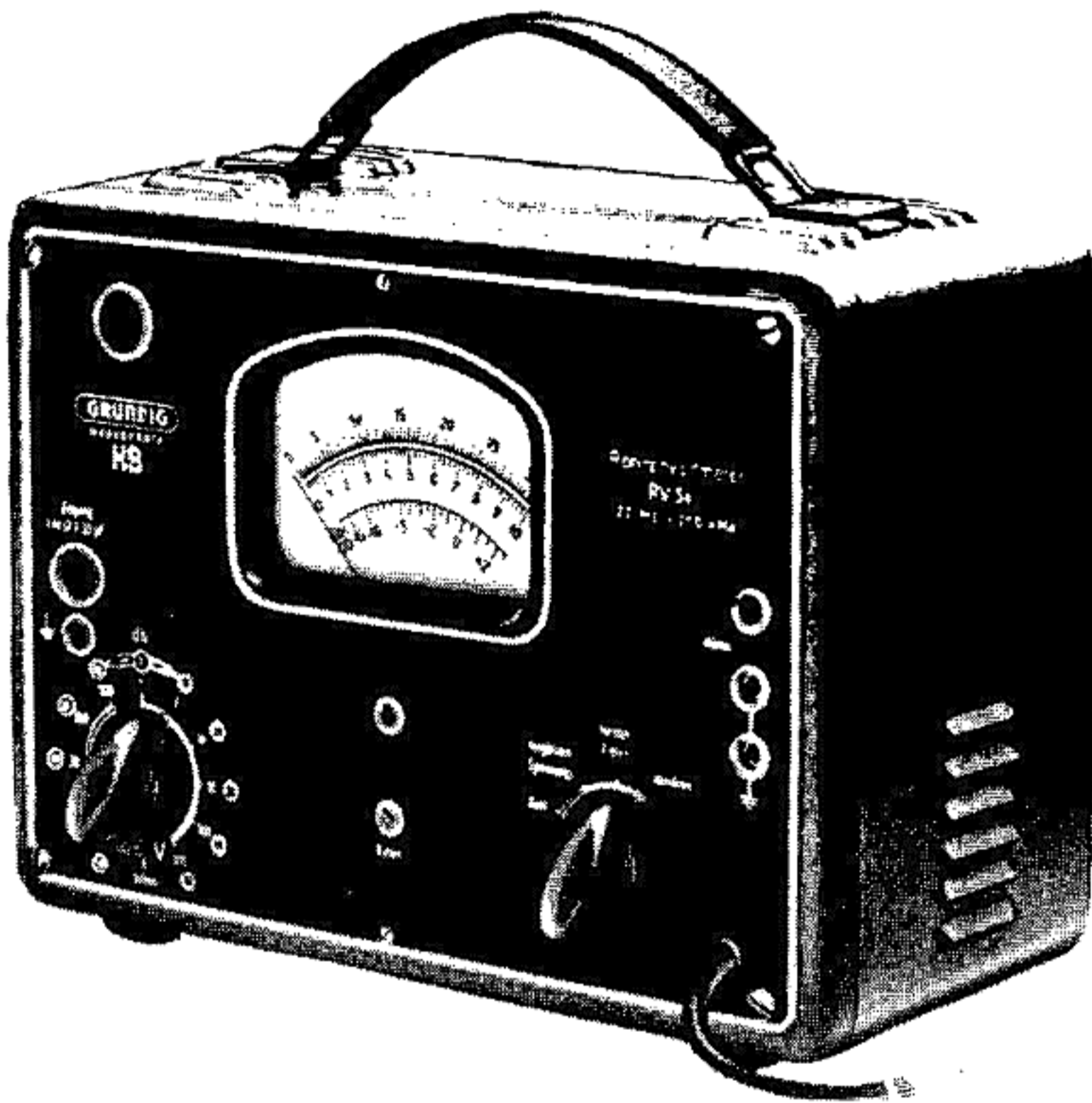
Für den **TONBAND-SERVICE**

notwendige

**GRUNDIG** Meßgeräte



Schwebungssummer 295



Röhrenvoltmeter RV 54



Oszillograph G 4 (6061)

**Technische Daten**

Stromaufnahme  $9,53 \text{ cm/s}$   
 $\pm 10\%$   $4,75 \text{ cm/s}$

Netz Sicherungen

Anodensicherung — träge

Bandgeschwindigkeit  $\text{cm/s}$

Toleranzen n. DIN 4511

Frequenzbereich  $9,53 \text{ cm/s}$   
 $4,75 \text{ cm/s}$

Ausgänge:  
Normbuchse DIN 41524  
hochohmig  
niederohmig

Messerkontaktleiste  
hochohmig  
niederohmig

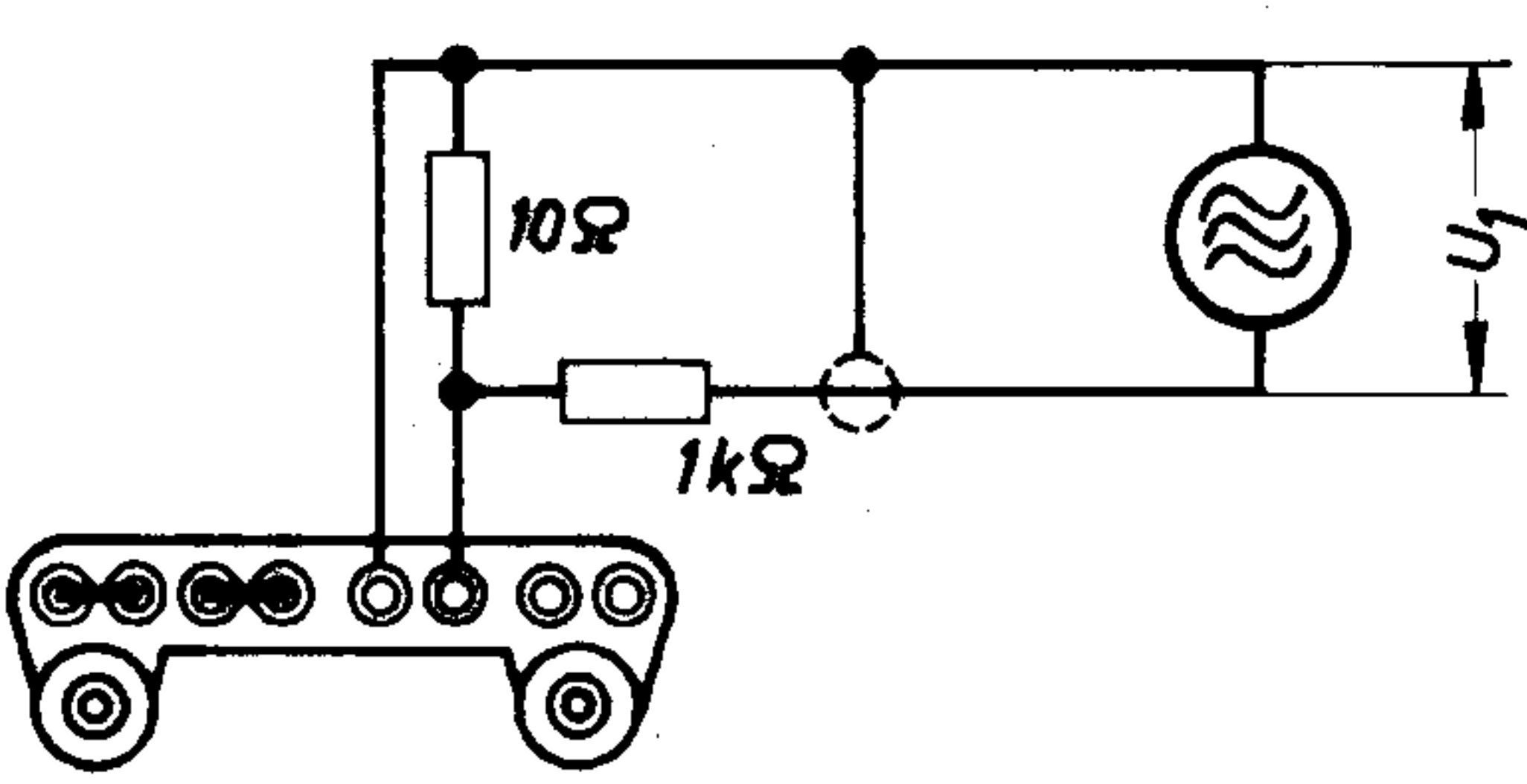
Max. Leistung der Endstufe  
bei  $K_{\text{tot}} = 10\%$

Klirrfaktor bei Voll-  
aussteuerung

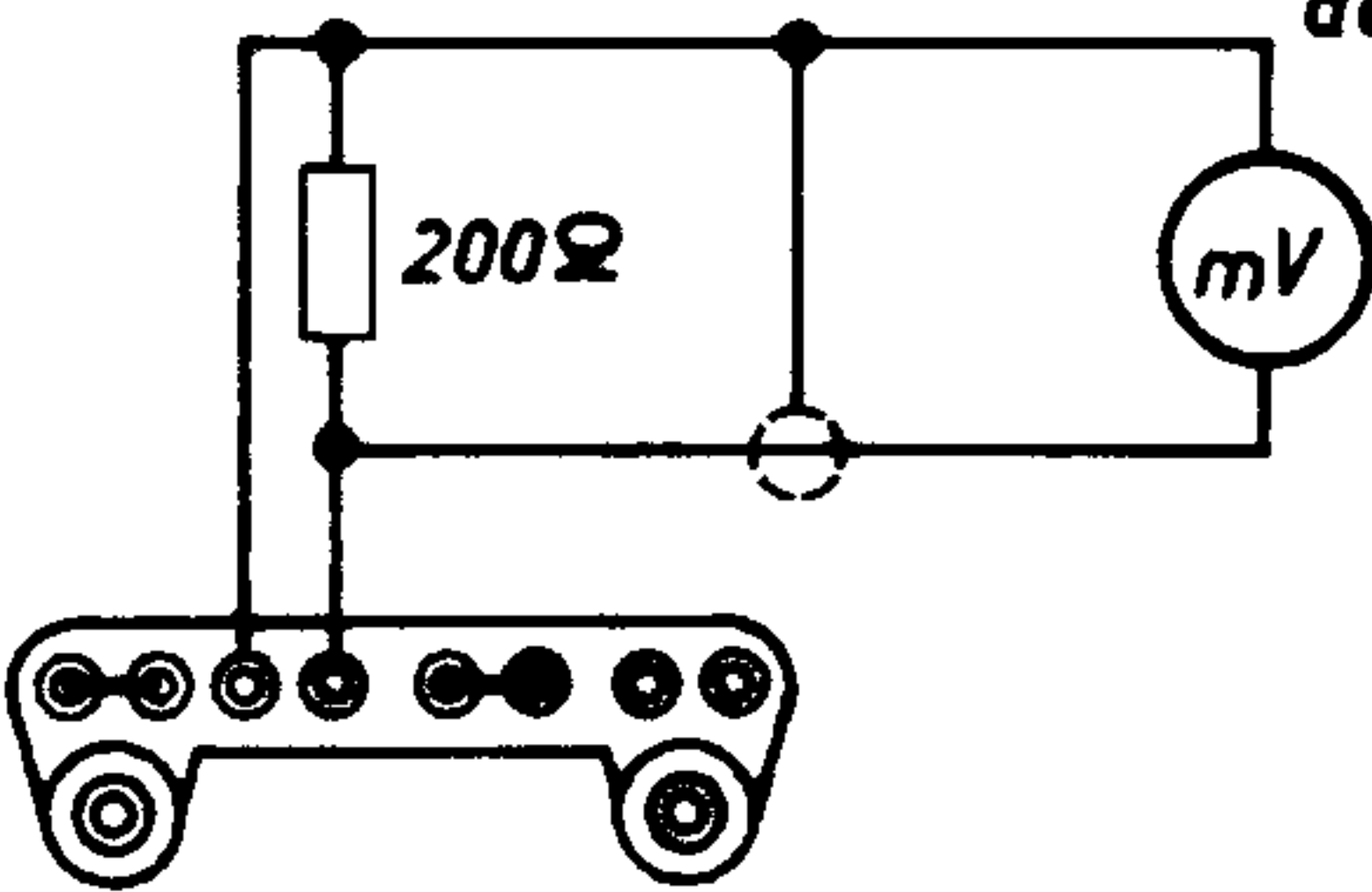
Gleichlauffehler, gehör-  
richtig gemessen  $9,53 \text{ cm/s}$   
 $4,75 \text{ cm/s}$

# Meßschaltungen

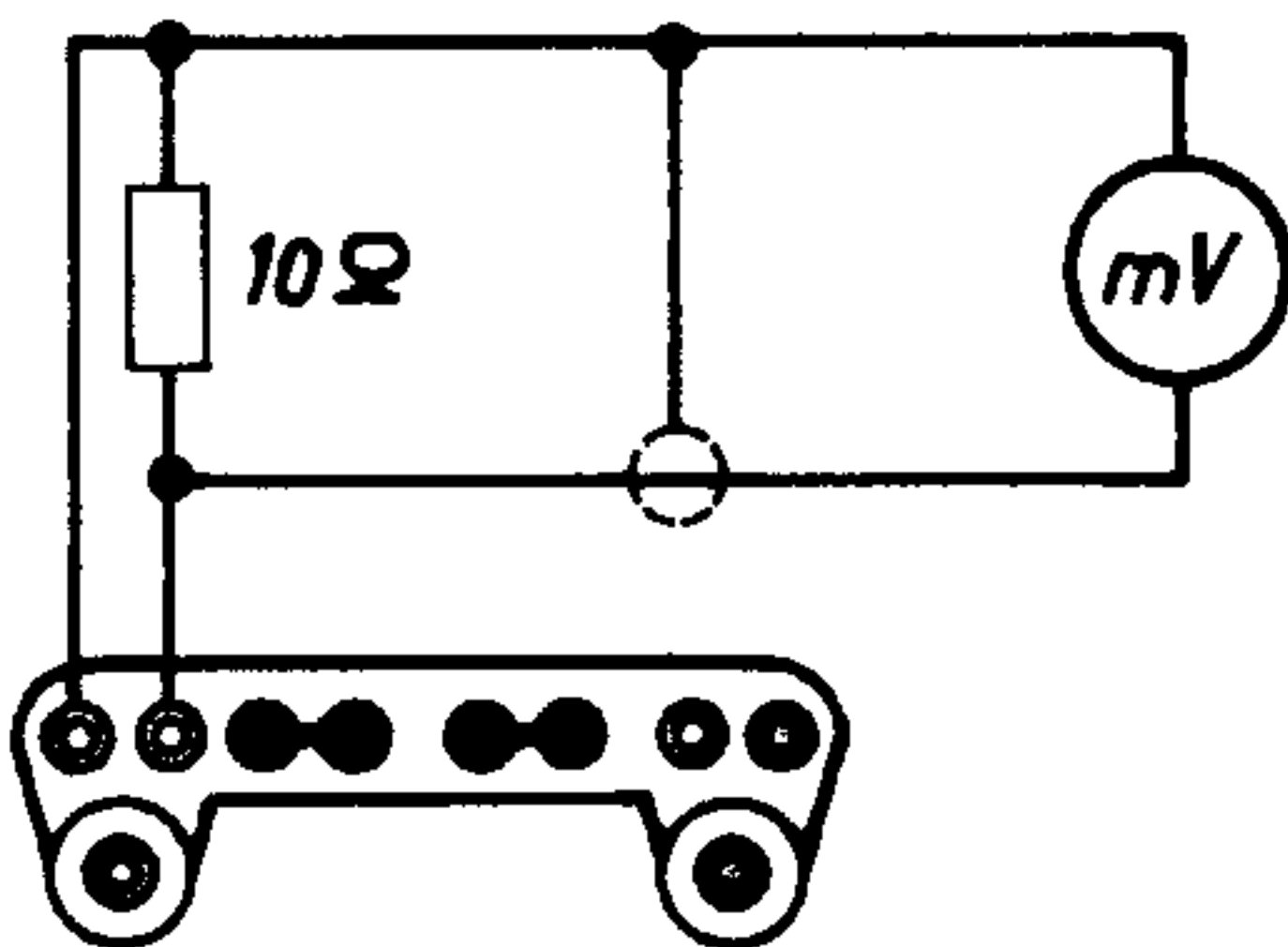
**Ms 1** Einspeisung zur Messung des Wiedergabekanal



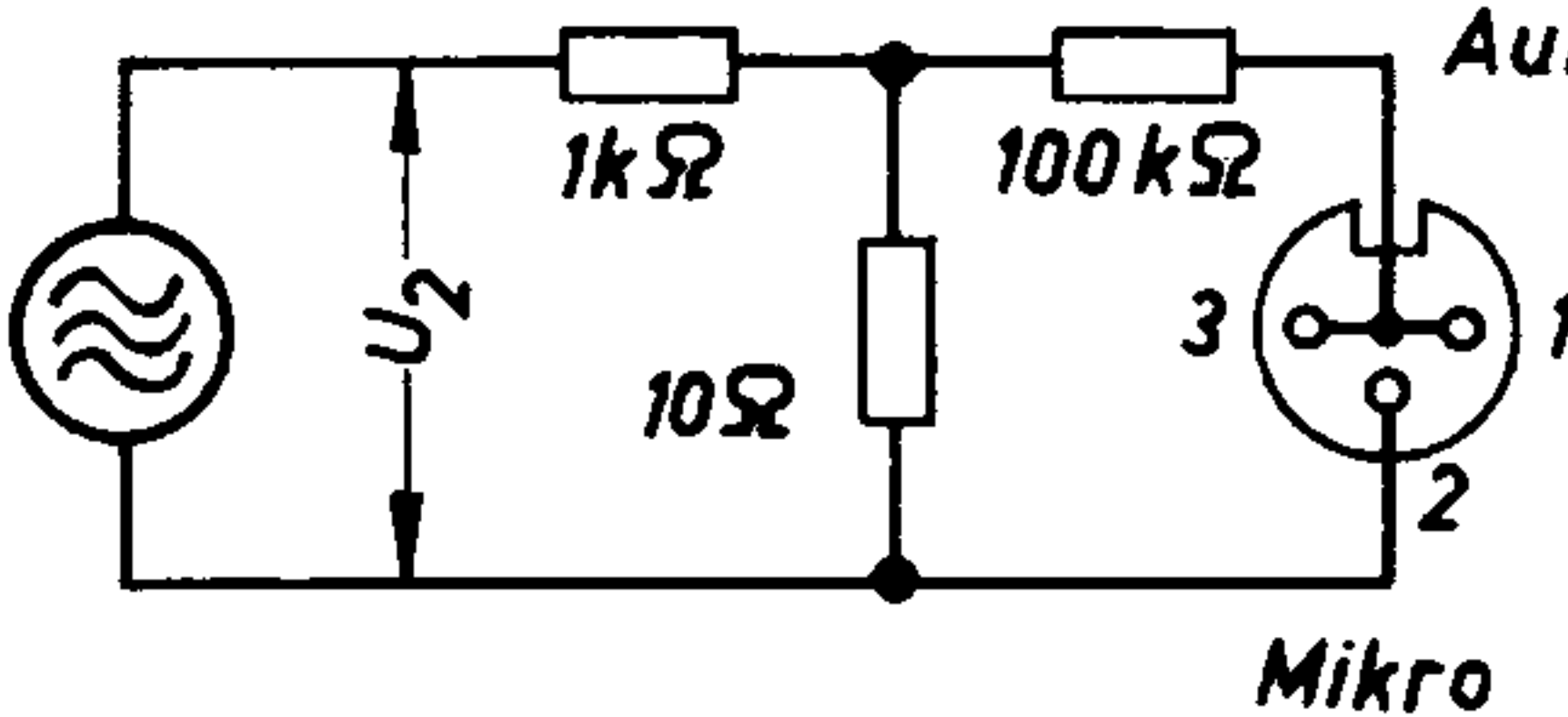
**Ms 2** zur Messung des Aufnahmestromes und der Vormagnetisierung



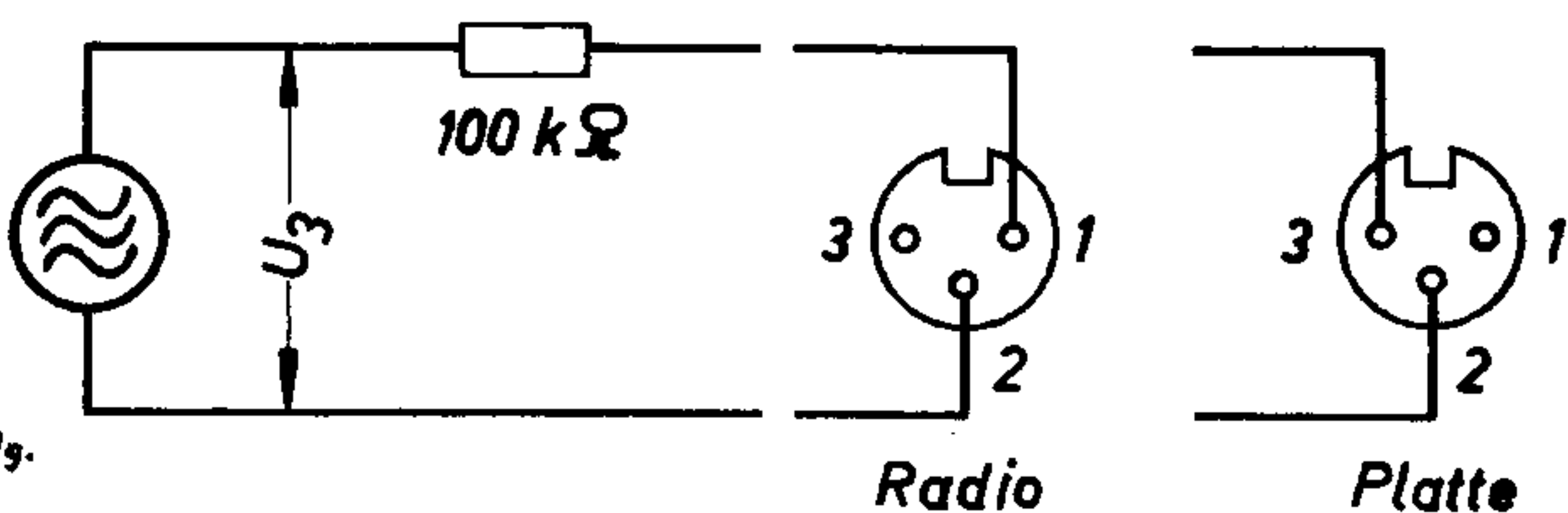
**Ms 3** zur Messung des Löschstromes



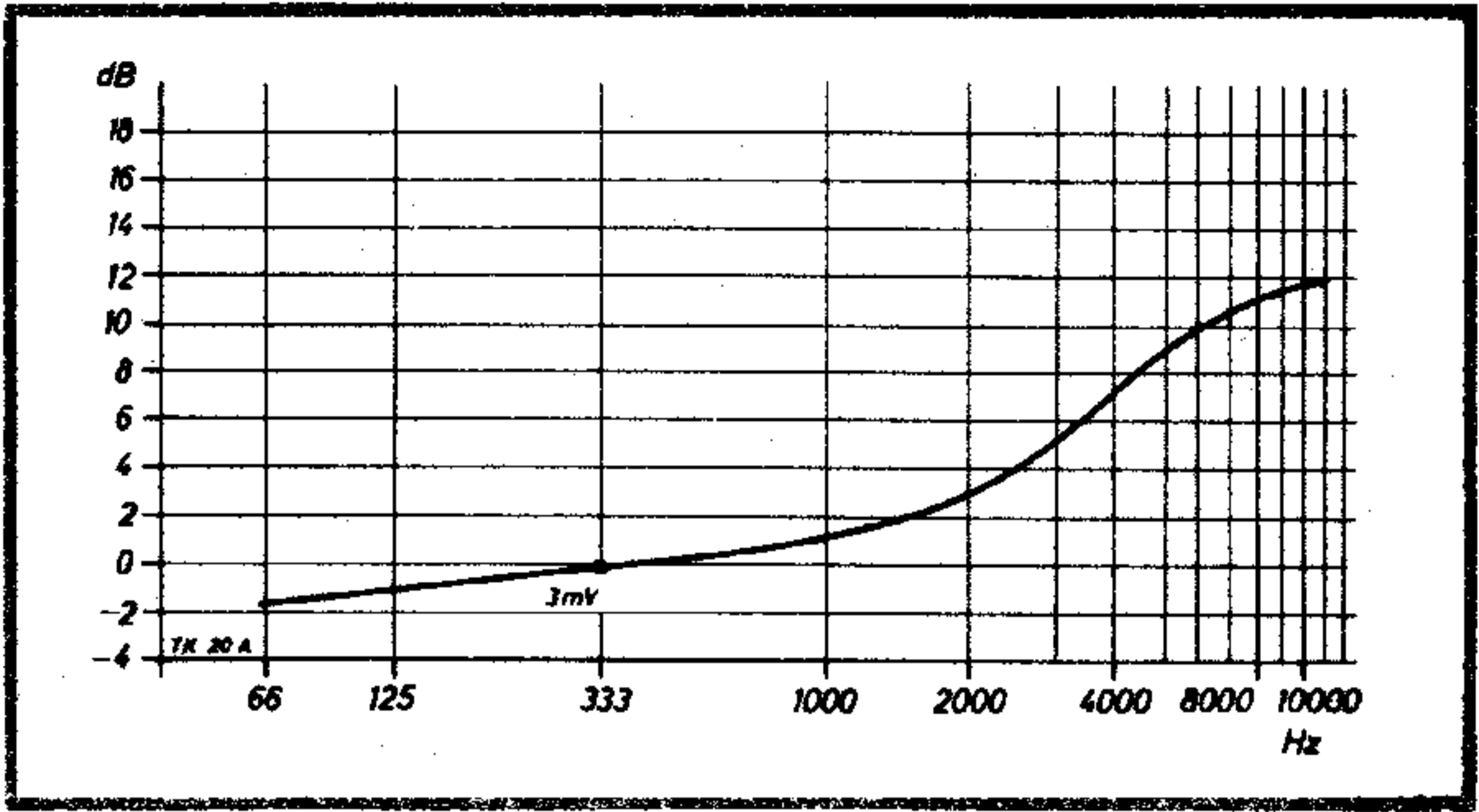
**Ms 4** Einspeisung zur Messung des Aufnahmekanals



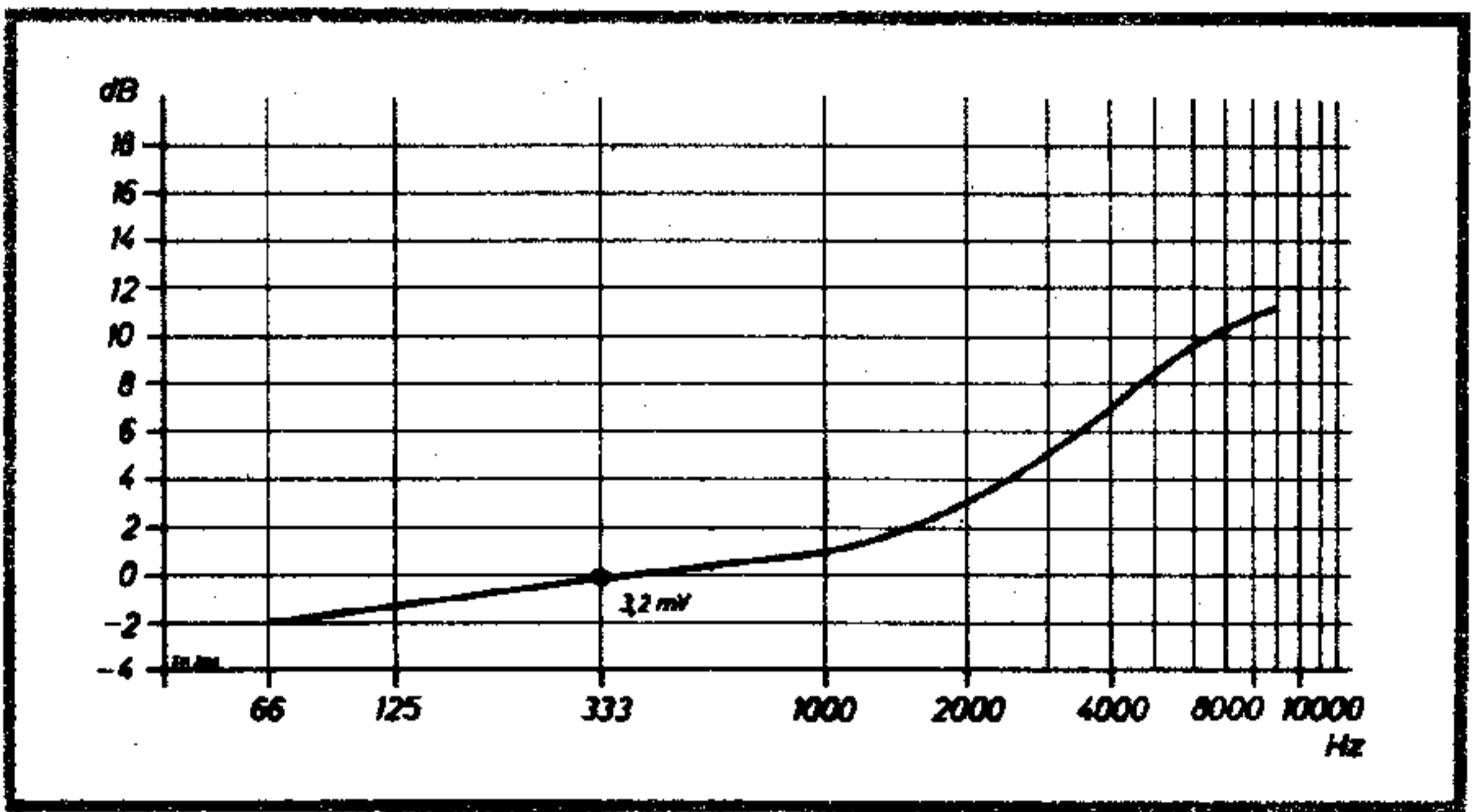
**Ms 5** Blick auf die Lötanschlüsse des Steckers



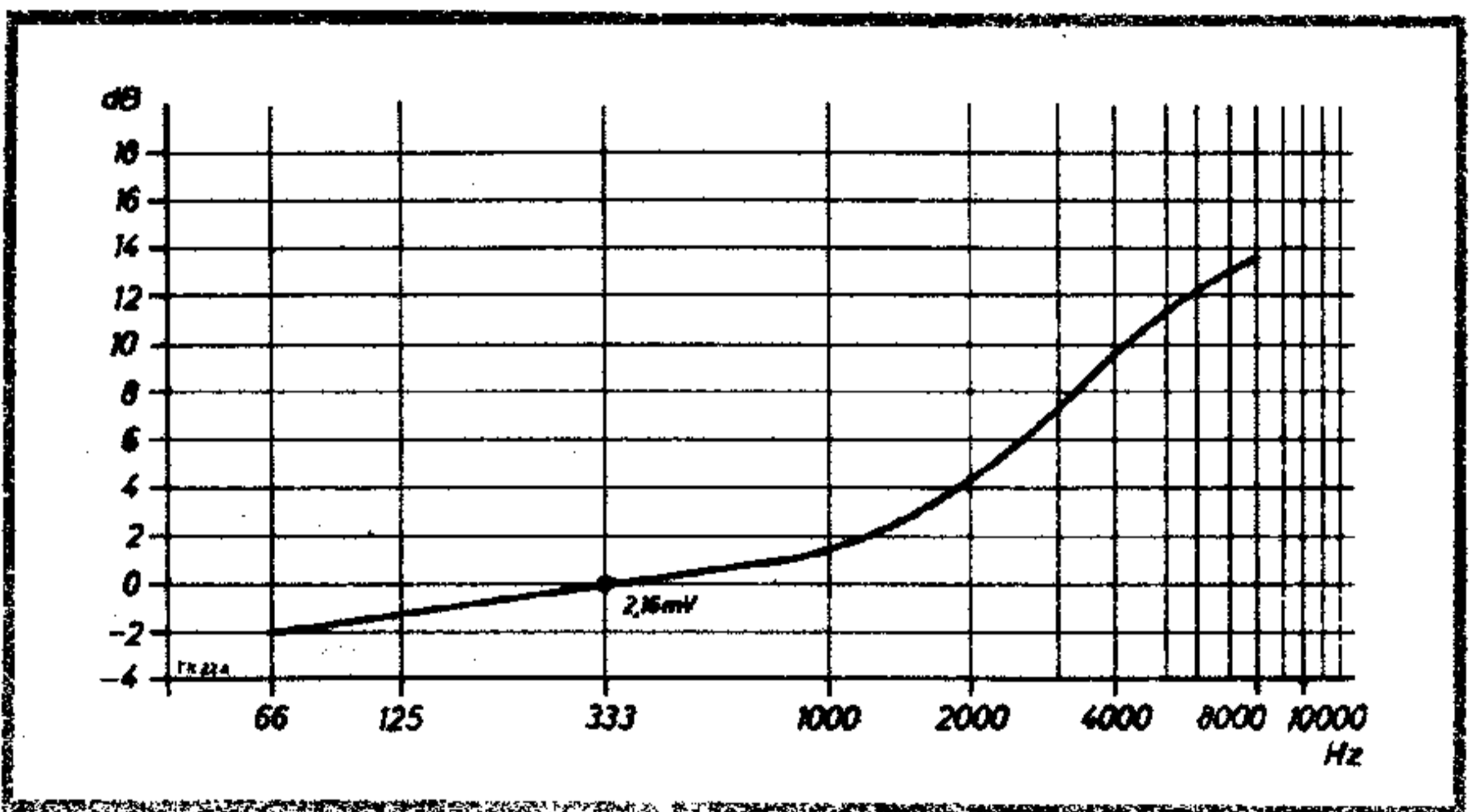
# Aufnahme-Entzerrer-Kurven



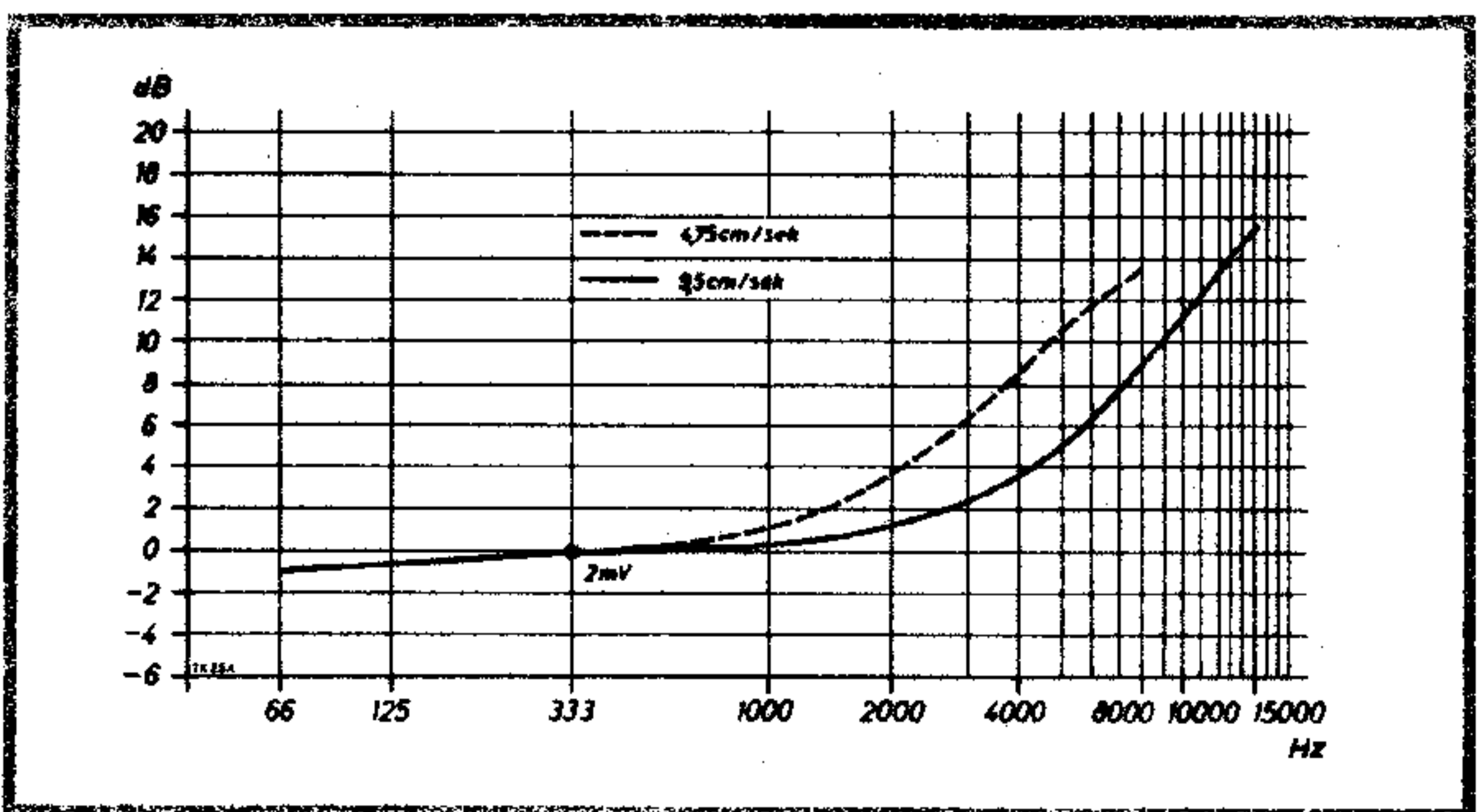
**TK 20**



**TM 20, TR 20, TS 58**

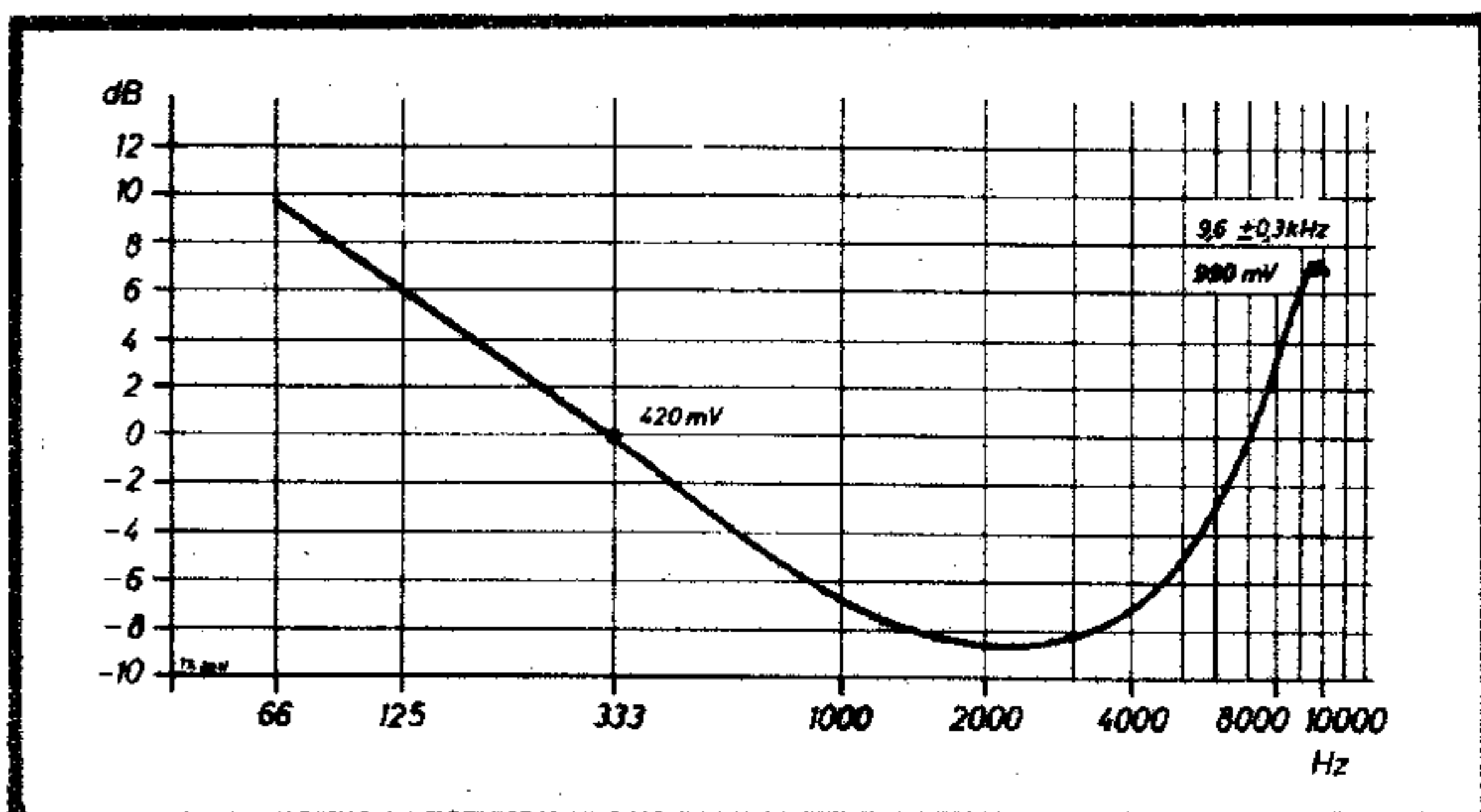


**TK 22**

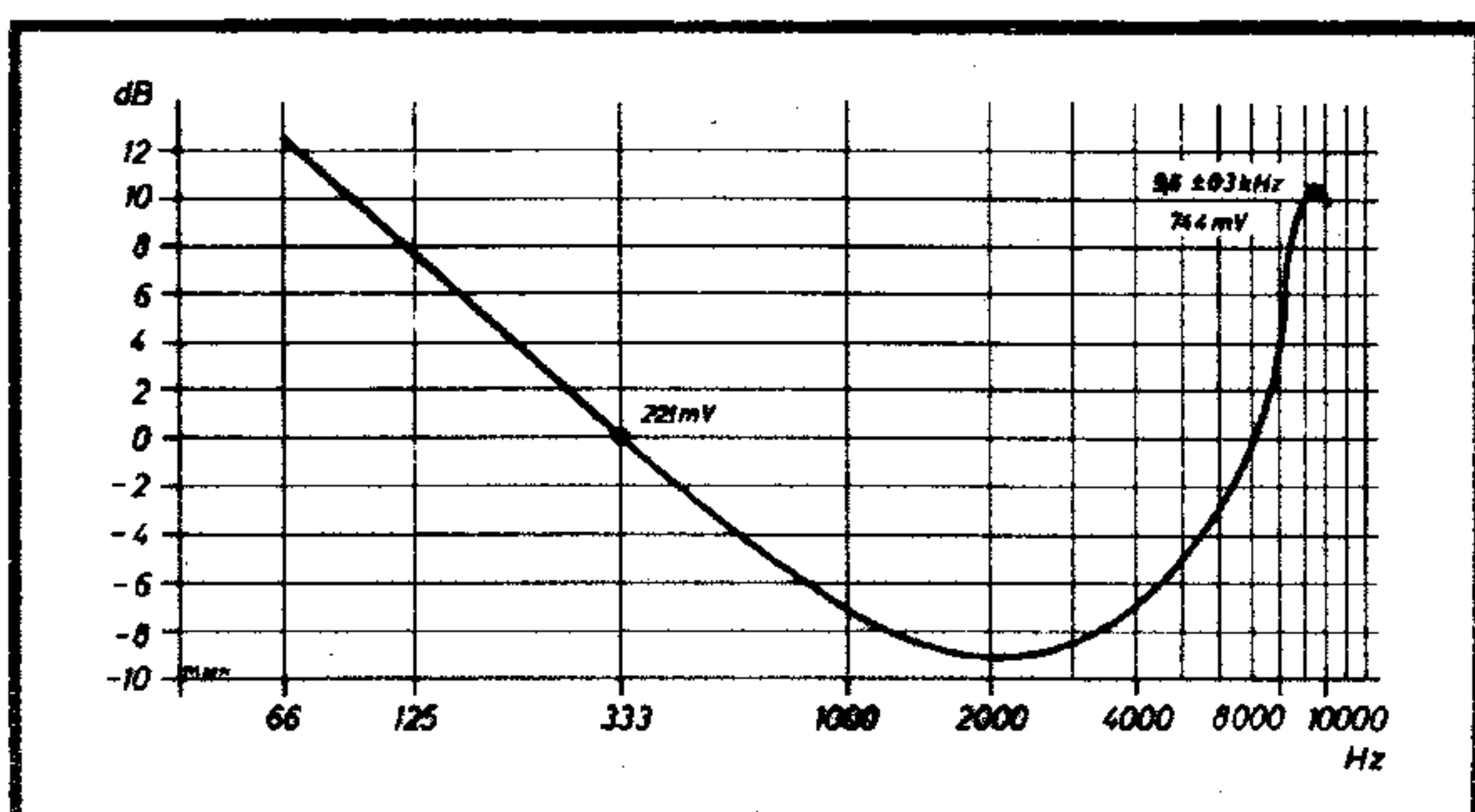


**TK 25**

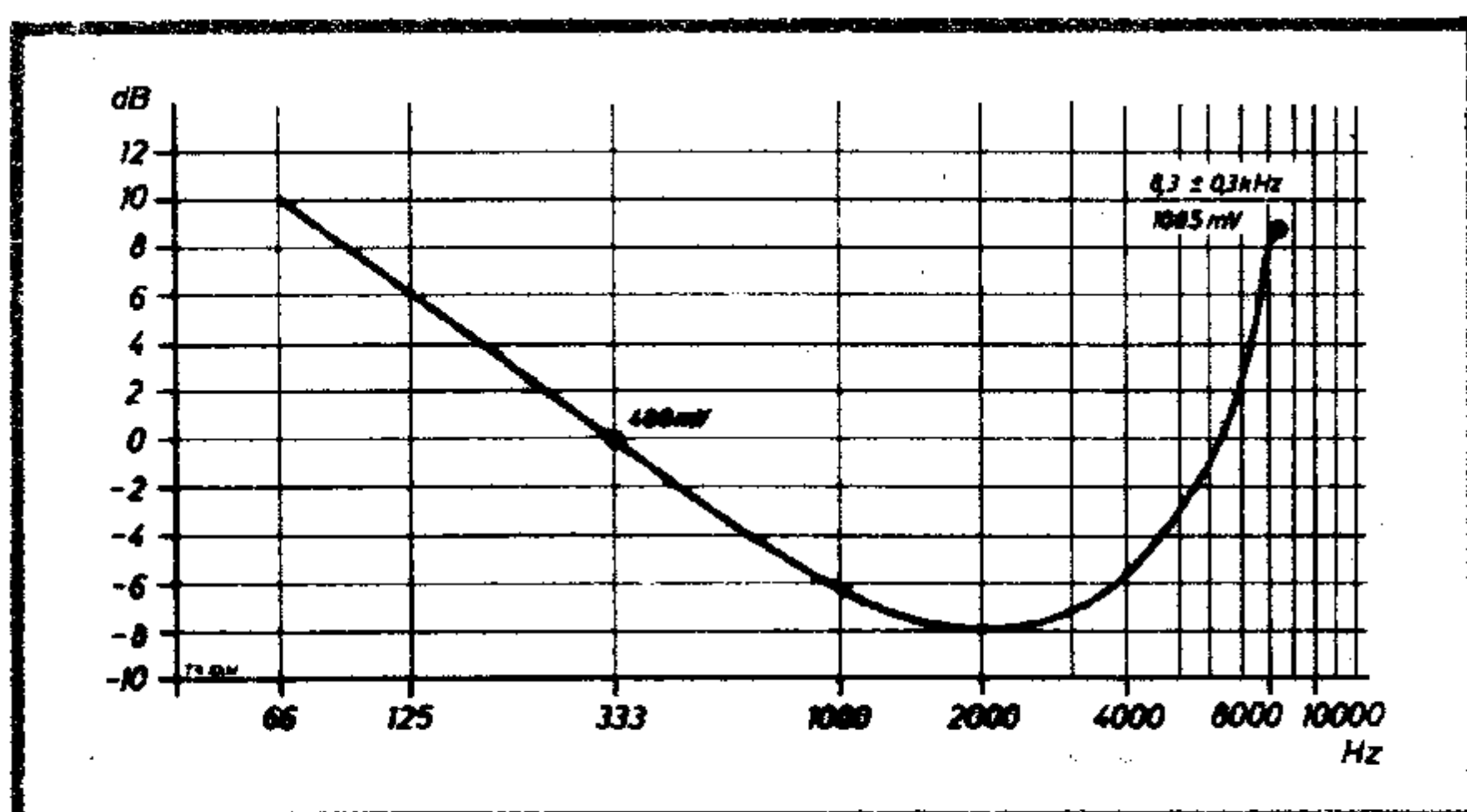
# Wiedergabe-Entzerrer-Kurven



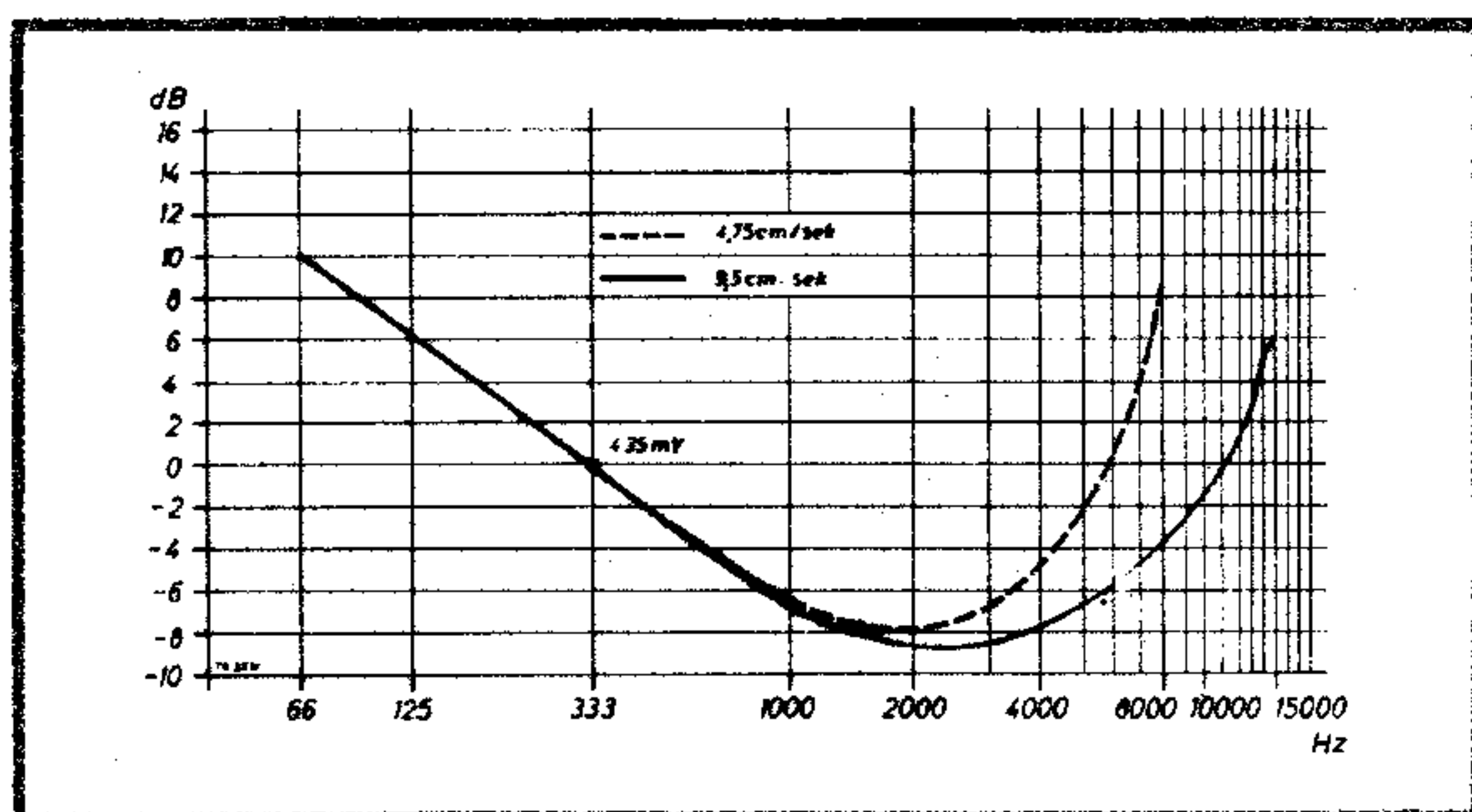
**TK 20**



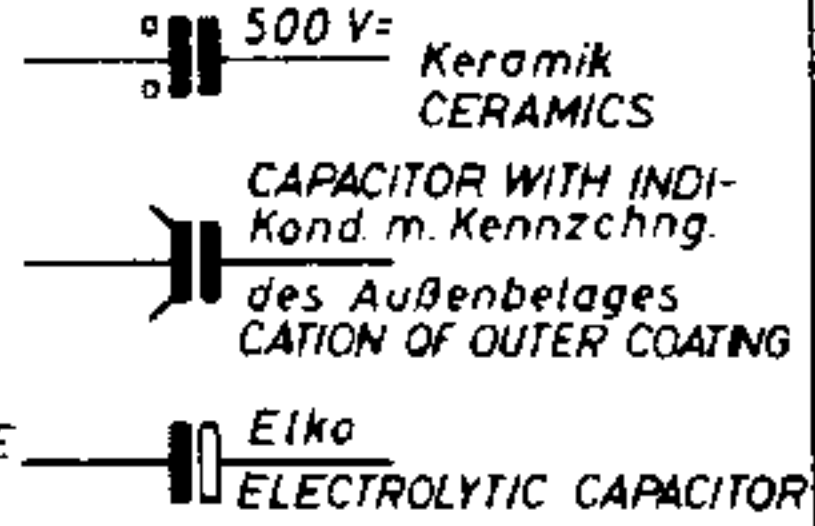
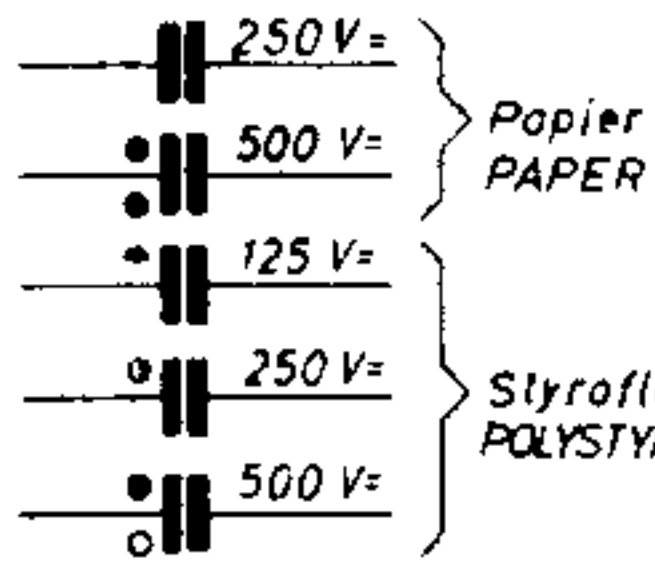
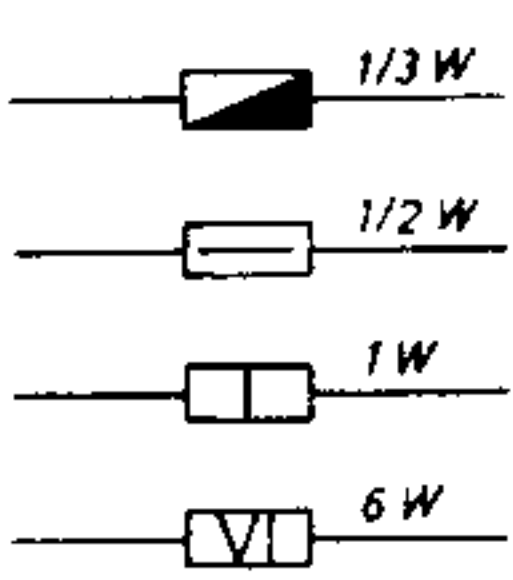
**TM 20, TR 20, TS 58**



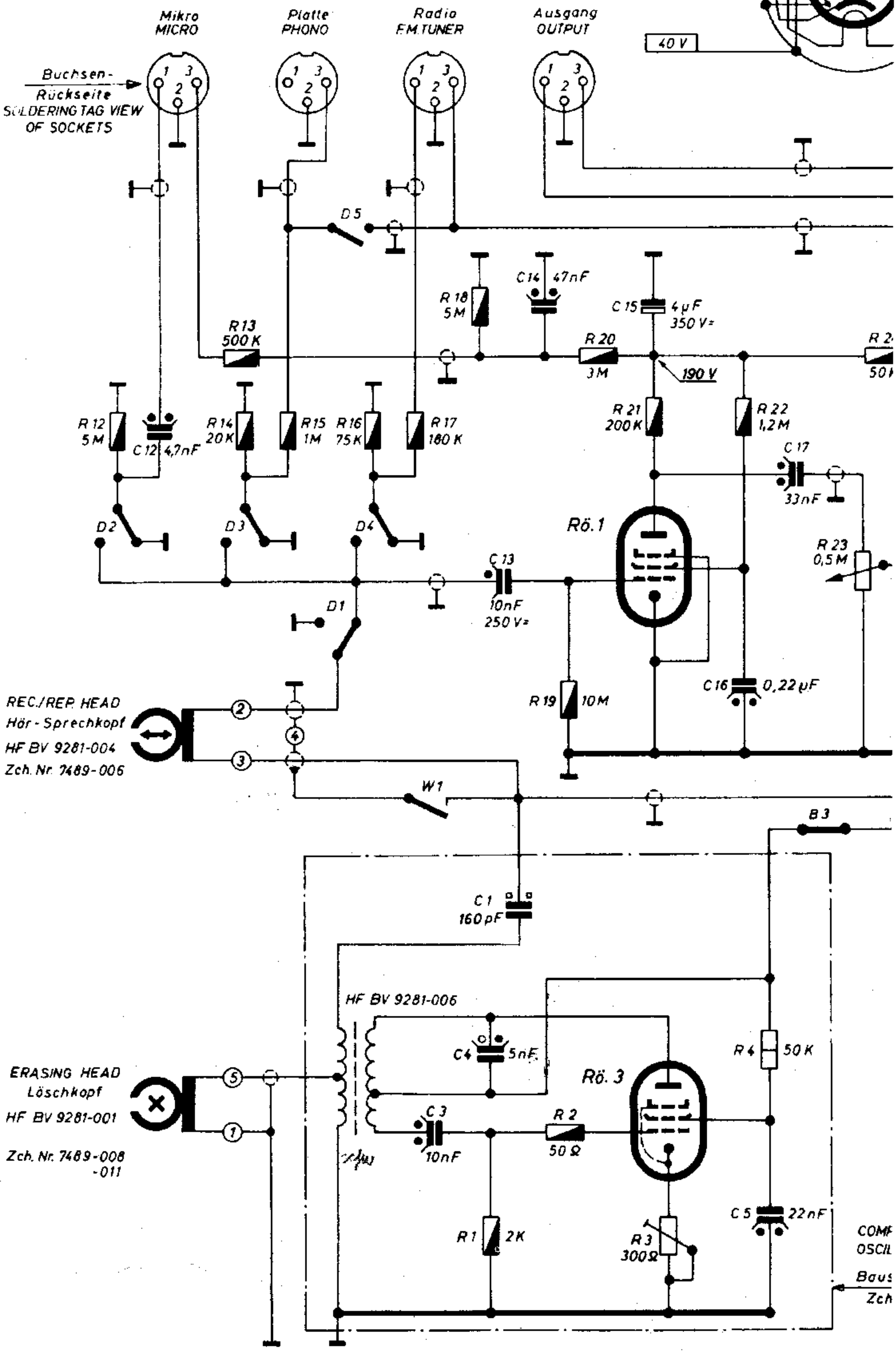
**TK 22**



**TK 25**



Rö.1  
EF 86



C:	12	13	14	15	16	17	18	19	20	21	22	23	24
R:	12	13	14	15	16	17	18	19	20	21	22	23	24

Kontakte:

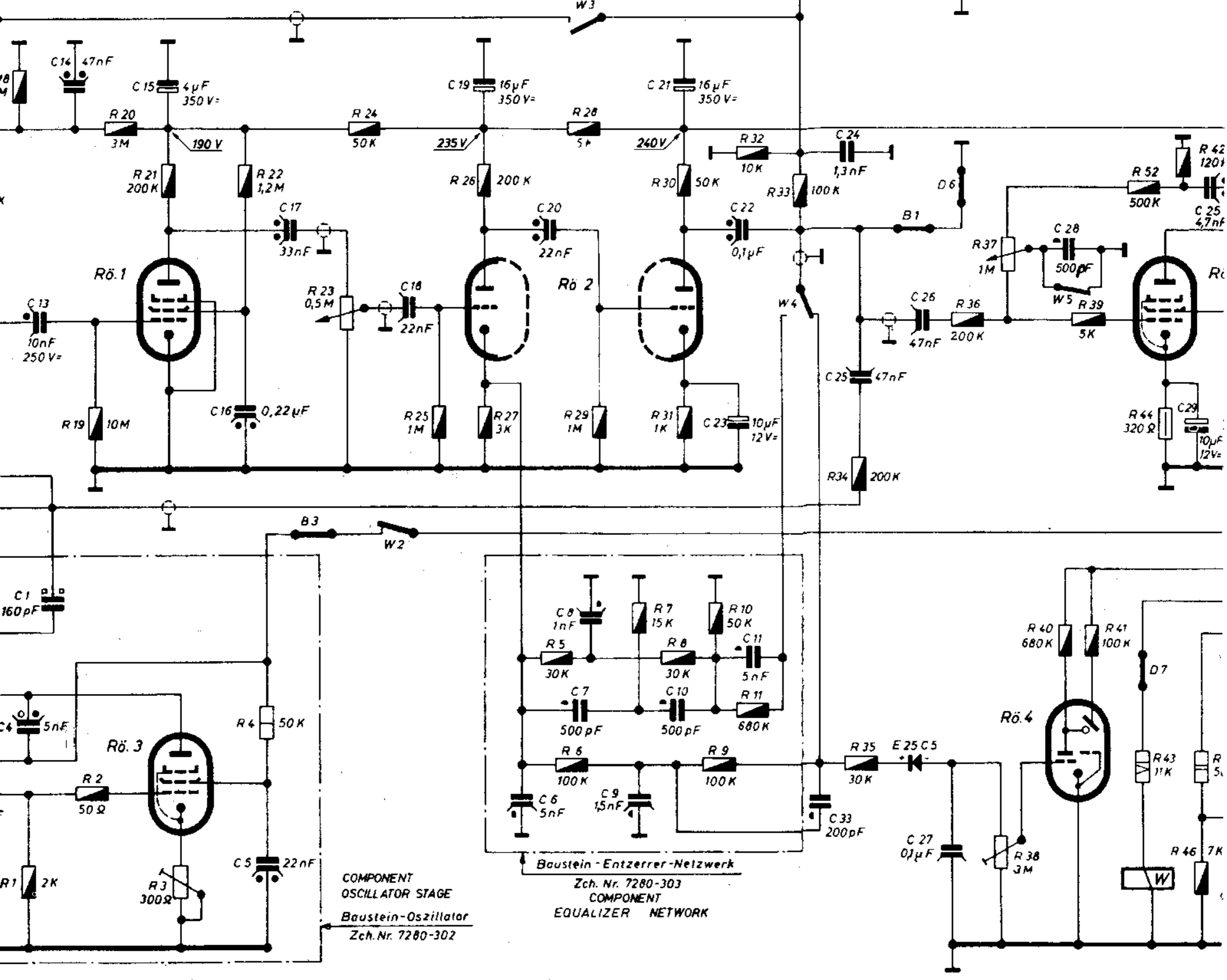
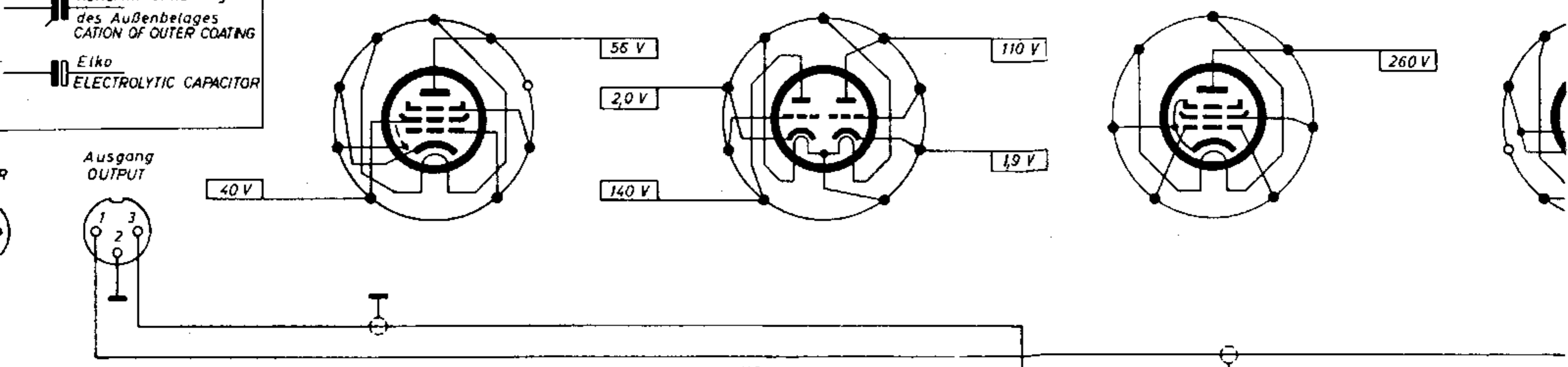
D2	D3	D5	W1	D4	B3
		D1			

500 V= Keramik CERAMICS  
 CAPACITOR WITH INDI-Kond. m. Kennzchnng. des Außenbelages CATION OF OUTER COATING  
 Elko ELECTROLYTIC CAPACITOR

Rö.1  
EF 86

Rö.2  
ECC 81

Rö.3  
EL 95



COMPONENT  
OSCILLATOR STAGE  
Baustein-Oszillator  
Zch.Nr. 7280-302

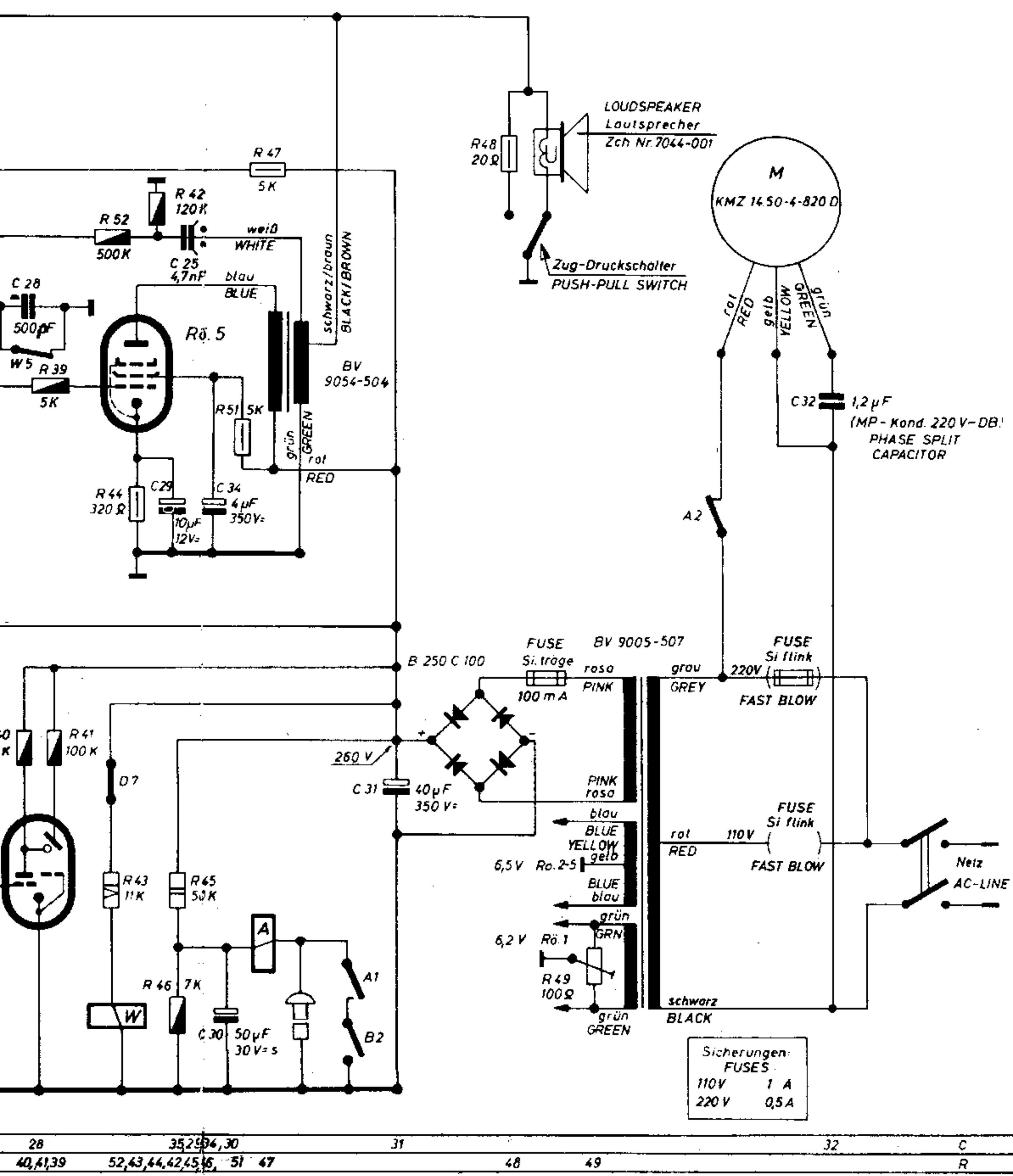
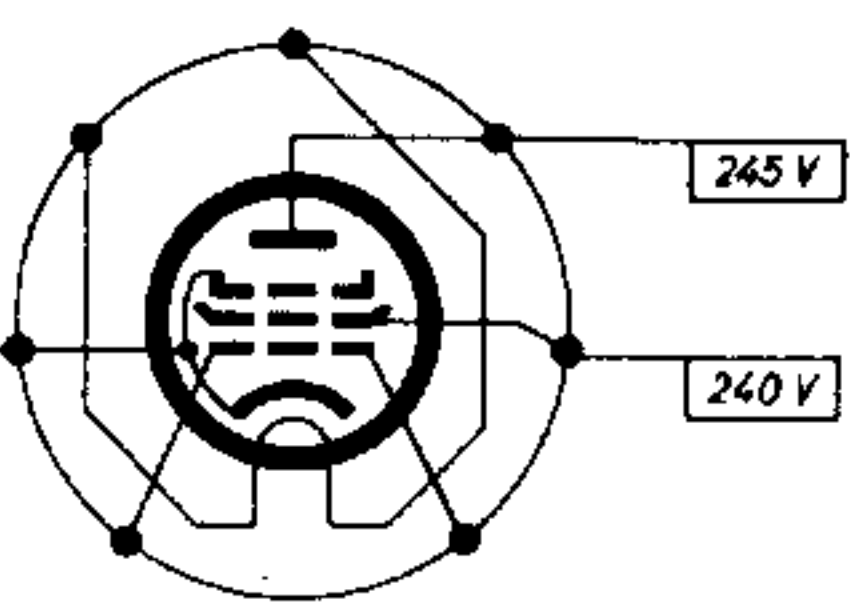
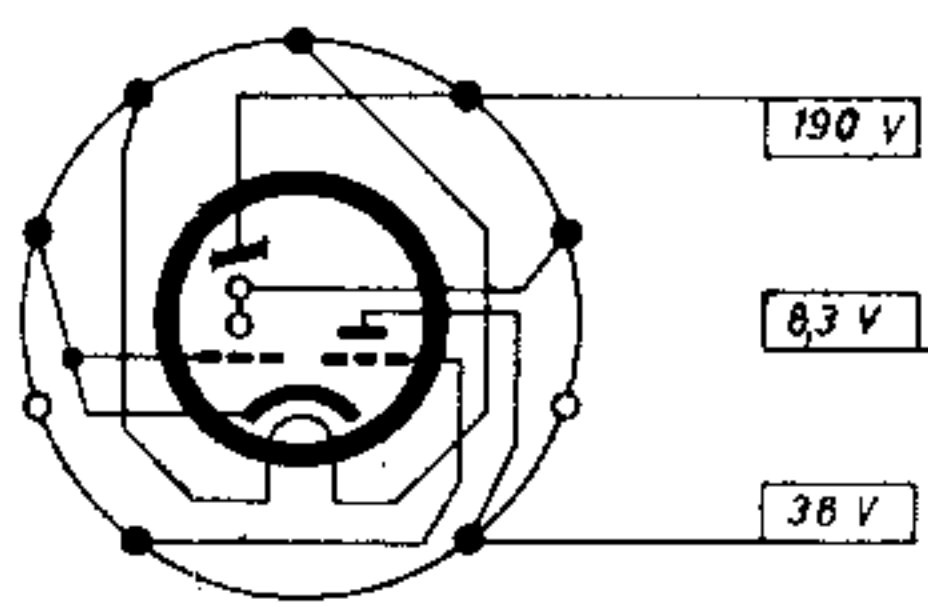
Baustein - Entzerrer-Netzwerk  
Zch. Nr. 7280-303  
COMPONENT  
EQUALIZER NETWORK

13	14	15	16	17	18	19	20	21	22,23	33	24,25	26	27	28	35,29		
16	19	20	21	22	23	24	25	26,27	28,29	30,31	32	33	34,35	36	37,38	40,41,39	52,43,44,42,45
B3	W2				W3				W4			B1	D6	W5	D7		



Rö. 4  
EM 84

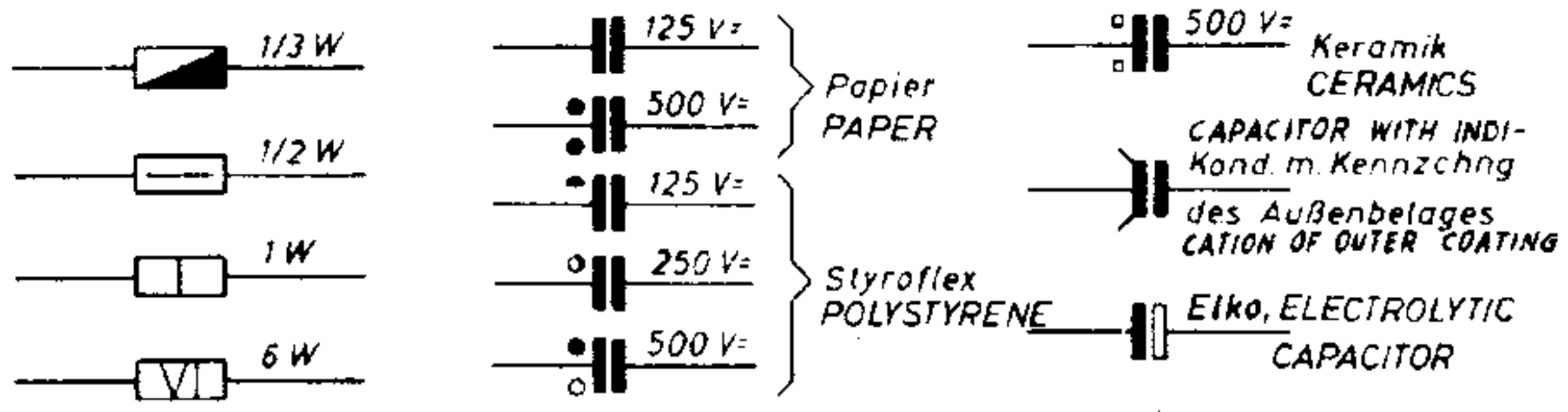
Rö. 5  
EL 95



Sicherungen:  
FUSES

110V	1 A
220V	0,5 A

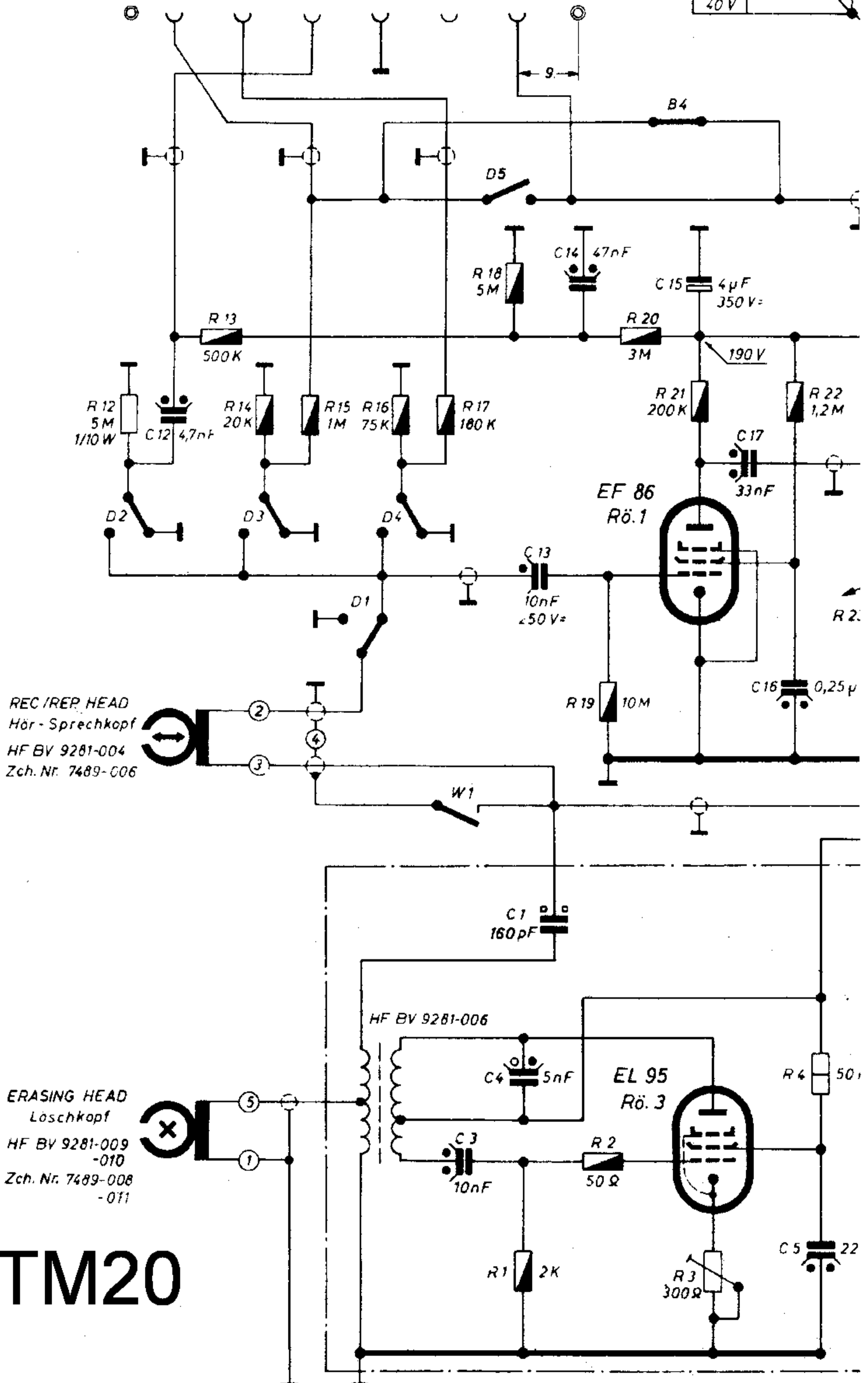
W5      D7      A1      Lautsprecherschalter      A2      Kontakte  
B2



Platte Radio Mikro  
PHONO FM.TUNER-MICRO

Ausgang  
OUTPUT

40 V

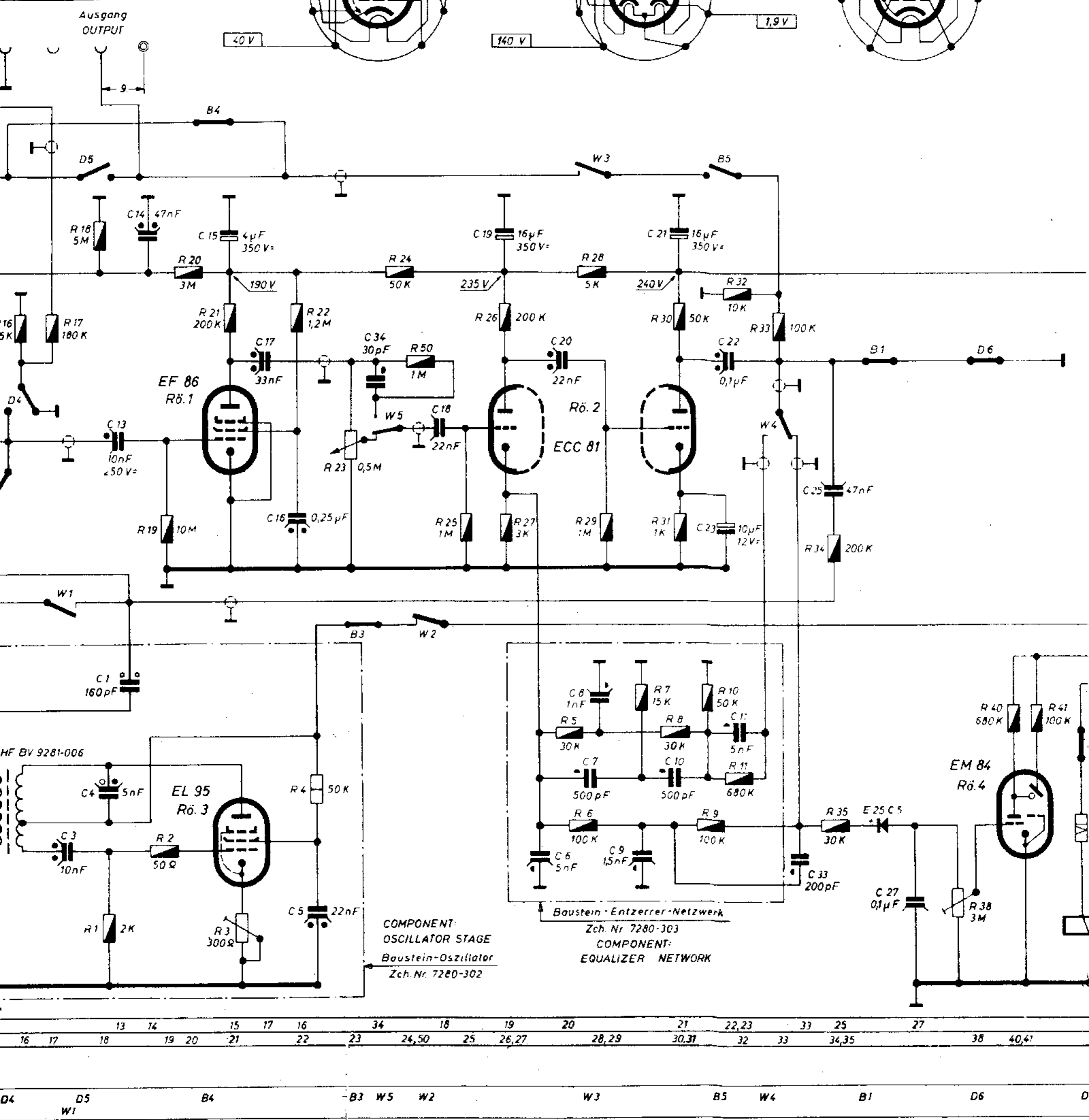
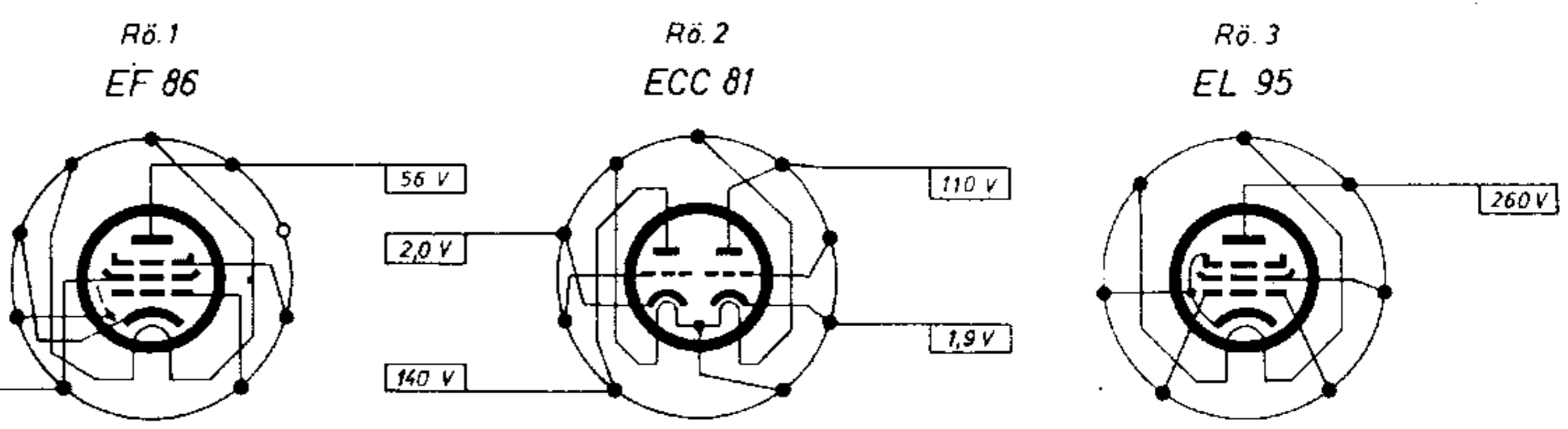


# TM20

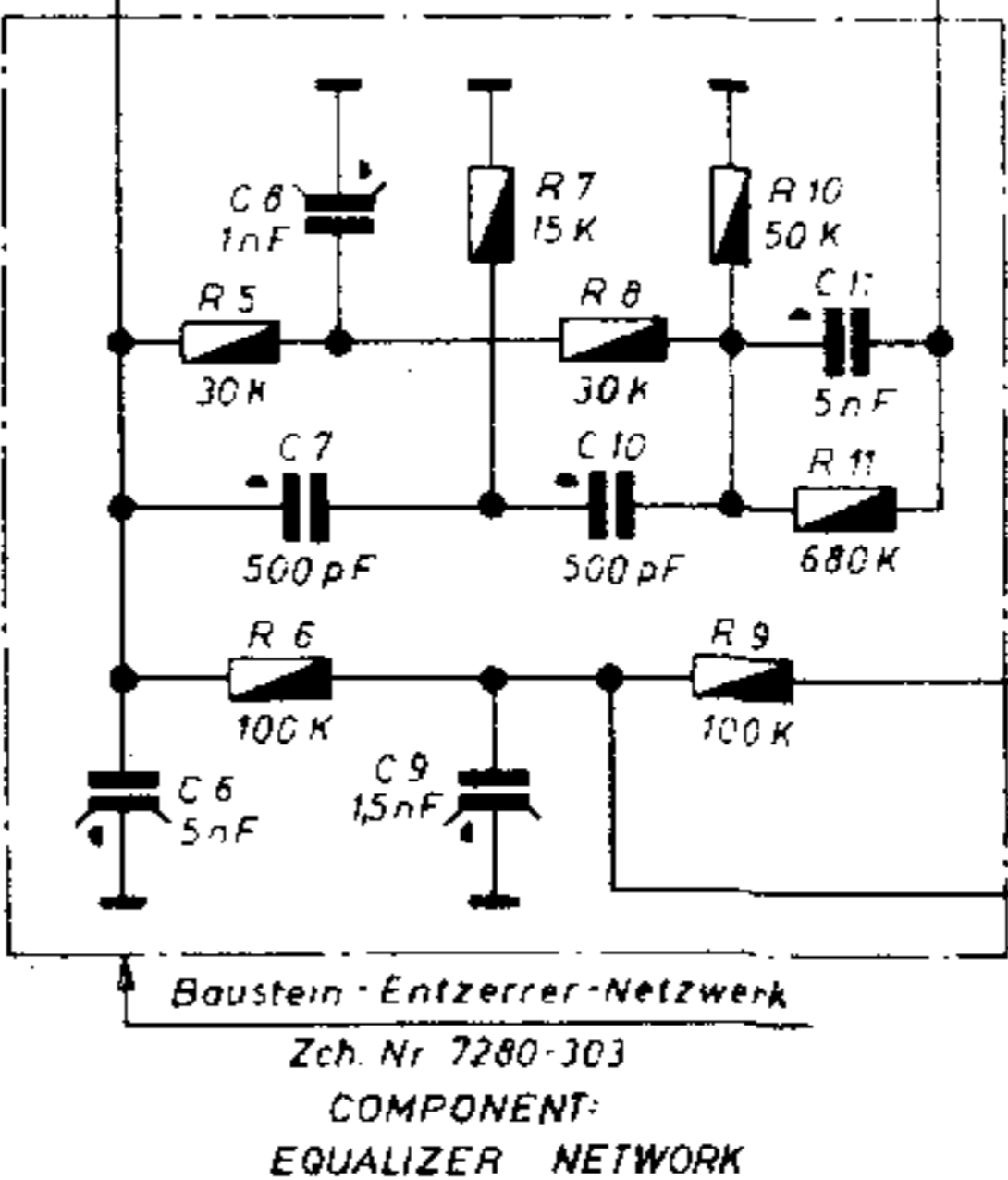
C:	12	13	14	15	16	17	16
R:	12	13	14	15	16	17	18

Kontakte: D2 D3 D4 D5 B4

500 V= Keramik CERAMICS  
 Papier PAPER  
 CAPACITOR WITH INDICATION OF OUTER COATING  
 Styrolflex POLYSTYRENE  
 Eiko, ELECTROLYTIC CAPACITOR

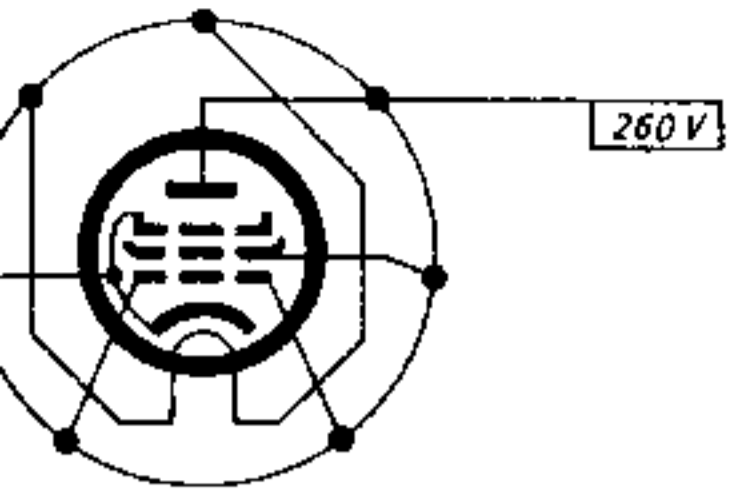


COMPONENT:  
 OSCILLATOR STAGE  
 Baustein-Oszillator  
 Zch. Nr. 7280-302



16 17 18 19 20 21 22 23 24,50 25 26,27 28,29 30,31 32 33 34,35 38 40,41  
 D4 D5 W1 B4 B3 W5 W2 W3 B5 W4 B1 D6

Rö. 3  
EL 95



Rö. 4  
EM 84

